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SPECTROSCOPY OF V1425 CYGNI AND AH CEPHEI

The star HD 202000 was discovered to be variable by the Bamberg Observatory and was given the provisional designation BV 346. Its HD spectral type is B8, and the visual magnitude of the system is 7.7 at maximum light. Photoelectric light curves of this eclipsing binary were obtained by Tate (IBVS Nr. 438), who also determined its period to be 1.252387 days. Subsequently the star was named V1425 Cygni.

On October 7 through 11, 1981, this investigator obtained seven spectrograms of V1425 Cygni using the 1.0 meter coude feed telescope of the Kitt Peak National Observatory. The emulsion used was IIaO, and the dispersion was 16.9 Å/mm. It was hoped that the system would prove to be a double-lined spectroscopic binary, since the two minima are approximately of the same depth. The Balmer lines, however, are extremely broad and are hopelessly blended at all orbital phases, and the weaker lines are all washed out by rotation. Interstellar H and K lines were present, and for the K line a mean velocity of -20 ± 2 km/s was obtained. The diffuse interstellar absorption feature at 4430 was not observed.

The eclipsing binary AH Cephei was also observed on four nights between October 7 and 11, 1981. The spectral type of this star is B1, and the lines are diffuse and strongly broadened by rotation. The interstellar H and K lines of CaII are very strong

and show a radial velocity of -31 ± 1 km/s. This value can be compared with the gamma-velocity for this system of -20.6 km/s obtained by Harper et al. (J. R. A. S. Canada, vol. 29, 413, 1935). The measurements used in determining the orbit which was reported in that paper showed a high degree of scatter, and it was hoped by this investigator that the orbit could be improved, but all of the spectral lines of AH Cephei proved to be extremely broad and shallow.

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